Challenge TB -

Year 2
Quarterly Monitoring Report
April-June 2016

Submission date: July 29, 2016

Table of Contents

Cover photo: Home Health Promoters (HHPs) in a Yei County village raise awareness about TB signs and symptoms, modes of transmission, and prevention using a flip chart designed, printed and distributed by the CTB team during a training in May 2016 through the CBO Yei Martha Clinic.

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Acronyms

ANC	Antenatal care
ART	AIDS Resistant Trust
BDQ	Bedaquiline
CCM	Country coordinating mechanism
CES	Central Equatoria State
CHD	County health department
CI	Contact investigation
CBO	Community based organization
CTB	Challenge TB
CTRL	Central TB Referential Laboratory
DG	Director General
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment, short-course
DQA	Data quality assurance
DST	Drug susceptibility testing
EES	Eastern Equatoria State
EQA	External quality assessment
GF	Global Fund
GLI	Global Laboratory Initiative
HCW	Health care worker
HF	Health facility
HH	Household
HHP	Home health promoter
IDP	Internally displaced population
IP	Infection prevention
IOM	International Office for Migration
IPT	Isoniazid preventive therapy
JTH	Juba Teaching Hospital
MDR-TB	Multi-drug resistant TB
M&E	Monitoring and evaluation
MOH	Ministry of Health
MOU	Modification of Understanding
MRDA	Mundri Relief and Development Association
MSH	Management Sciences for Health
NTP	National TB Program
OPD	Outpatient department
MOT	Modification of tracker
NTLSP	National TB Lab Strategic Plan
NSP	National Strategic Plan
PHCC	Public health care center
PHCU	Public health care unit
PHL	Public Health Laboratory
PMDT	Programmatic management of drug resistant TB
PoC	Protection of civilians
SPEDP	Support for Peace Education Program
SSM	Sputum smear microscopy
SOP	Standard operating procedure
SS+	Sputum smear positive
STTA	Short-term technical assistance
TA	Technical assistance
TB	Tuberculosis
TBIC	TB infection control
TBMU	TB medical unit
TSR	Treatment success rate
TWG	Technical working group
TOT	Training of Trainers
UNDP	United Nations Development Program
USAID	United States Agency for International Development
WES	Western Equatoria State
WHO	World Health Organization
YMC	Yei Martha Clinic

1. Quarterly Overview

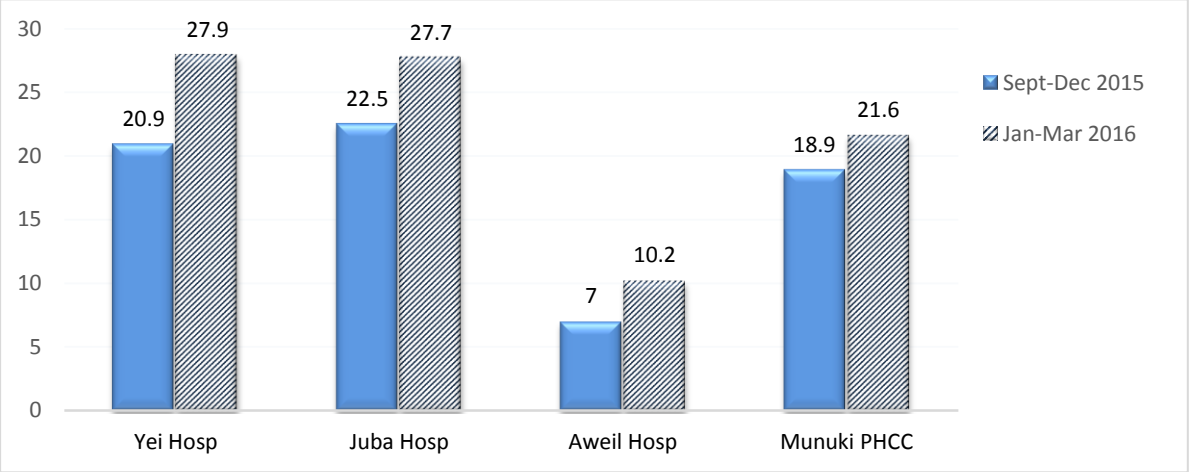
Country	South Sudan
Lead Partner	Management Sciences for Health (MSH)
Other partners	
Work plan timeframe	October 2015 – September 2016
Reporting period	April – June 2016

Most significant achievements:

1. Use of LED Microscopy and EQA for Sputum Smear Microscopy (SSM)

In 2015 and thus far in 2016, 26 LED microscopes have been distributed in 7 states, including Central Equatoria, Eastern Equatoria, Lakes, Northern Bahr al Ghazal, Western Bahr el Ghazal, Warrap, and Western Equatoria. In addition, 26 lab technicians (20 males and 6 females) were trained on the use of LED microscopy. As illustrated in Figure 1 below, 4 demonstration sites have showed an increase in slide positivity rates between the period of September-December 2015 and the period of January- March 2016. All rates are above the World Health Organization (WHO) recommended range of 10%. This explains delays in diagnosing TB patients in Yei, Juba, and Munuki, and further emphasizes the need for awareness and an increase in contact investigation.

Figure 1: Slide positivity rate



Cumulatively, the number of laboratories involved in external quality assessment (EQA) has increased from 38 in 2015 to 48 in 2016, which indicates a 24% increase in one year (2014-2015). Among 31 laboratories that were rechecked, 92% demonstrated 100% concordance.

Table 1: EQA Indicators in TB labs involved in EQA – January 2015 – June 2016

EQA Indicators	Number	Percentage
Number of laboratories participating in EQA	48	62% (48/78)
Number and percentage of participating laboratories that were rechecked	31	65% (31/48)
Number of positive slides rechecked	65	22% 65/304
Number of negative slides rechecked	239	79%(239/304)
Overall percentage false positives	2	3% (2/65)
Overall percentage false negatives	1	0.4% (1/239)
Overall percentage true positives / all positives	63	97% (63/65)
Number and percentage of laboratories with 100% true positives	28	92%(28/31)

2. Treatment Success Rate (TSR) for the CTB target areas

Between January and March 2015, 1,864 patients were registered and enrolled for treatment in CTB intervention areas, among which 84% were successfully treated. In comparison with the previous quarter (Oct. to Dec. 2014), the TSR was 82% (1,687/2,007). As shown in Table 2, Central and Western Equatoria State TSR has dropped due to insecurity in most part of the states which resulted to displacement of some community that make it difficult to track TB patients and high rate of lost to follow up patients as indicated by an 8% (158/2007) default rate in the Jan-Mar 2015 treatment cohort. Despite the challenges, the overall TSR in CTB intervention areas has slightly progressed toward achieving the set target of 85% by 2019.

Table 2: Treatment success rates (%), 2014-2015 treatment cohorts

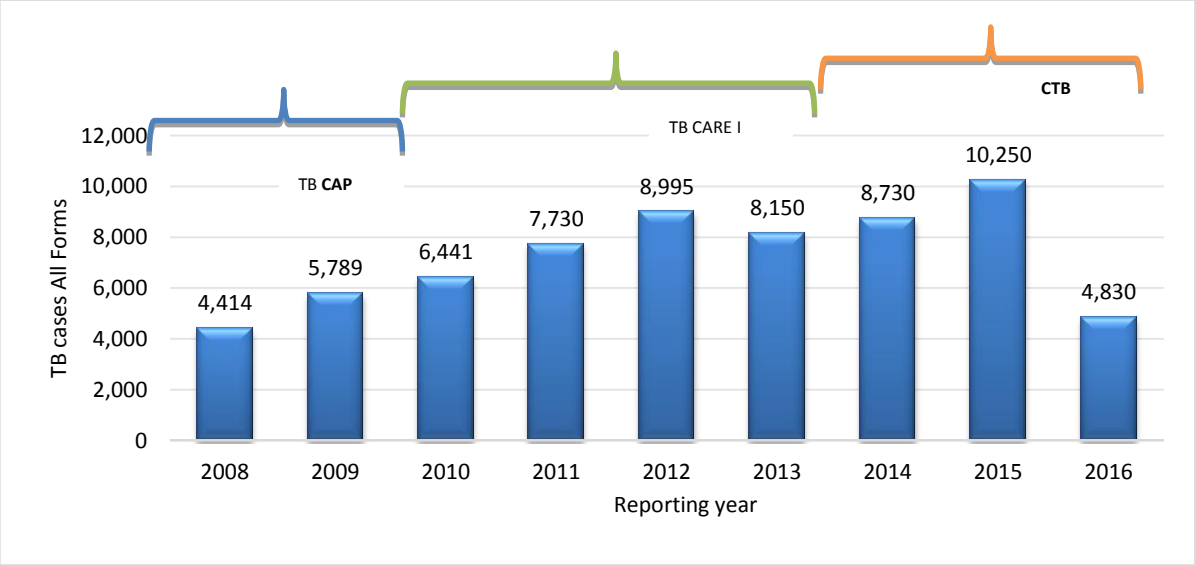
Intervention Area	Treatment success rates (%)			
	Baseline (2013)	July –Sept 2014 cohort	Oct –Dec 2014 cohort	Jan-March 2015 cohort
Overall CTB area	**55**	**74**	**82**	**84**
Central Equatoria	54	82	86	84
Western Equatoria	47	52	76	66
Eastern Equatoria	59	56	66	69

Source: NTP

3. TB Case Notification

CTB supported the National Tuberculosis Program (NTP) in establishing 19 treatment centers in the Central and Eastern Equatoria regions, strengthening its information system, conducting quarterly joint supportive supervision, networking and sharing information through the TB technical working group (TWG), and coordinating with implementing partners and health workers to generate the TB quarterly report. CTB also trained 318 health care workers (HCW), including 253 males and 65 females, between October 2015 and June 2016; and integrated 12 laboratories to perform TB microscopy. As a result, between January–March 2016, 50% of the cases were notified from CTB intervention areas, among which 6% of cases were detected through contact investigation (see Table 3).

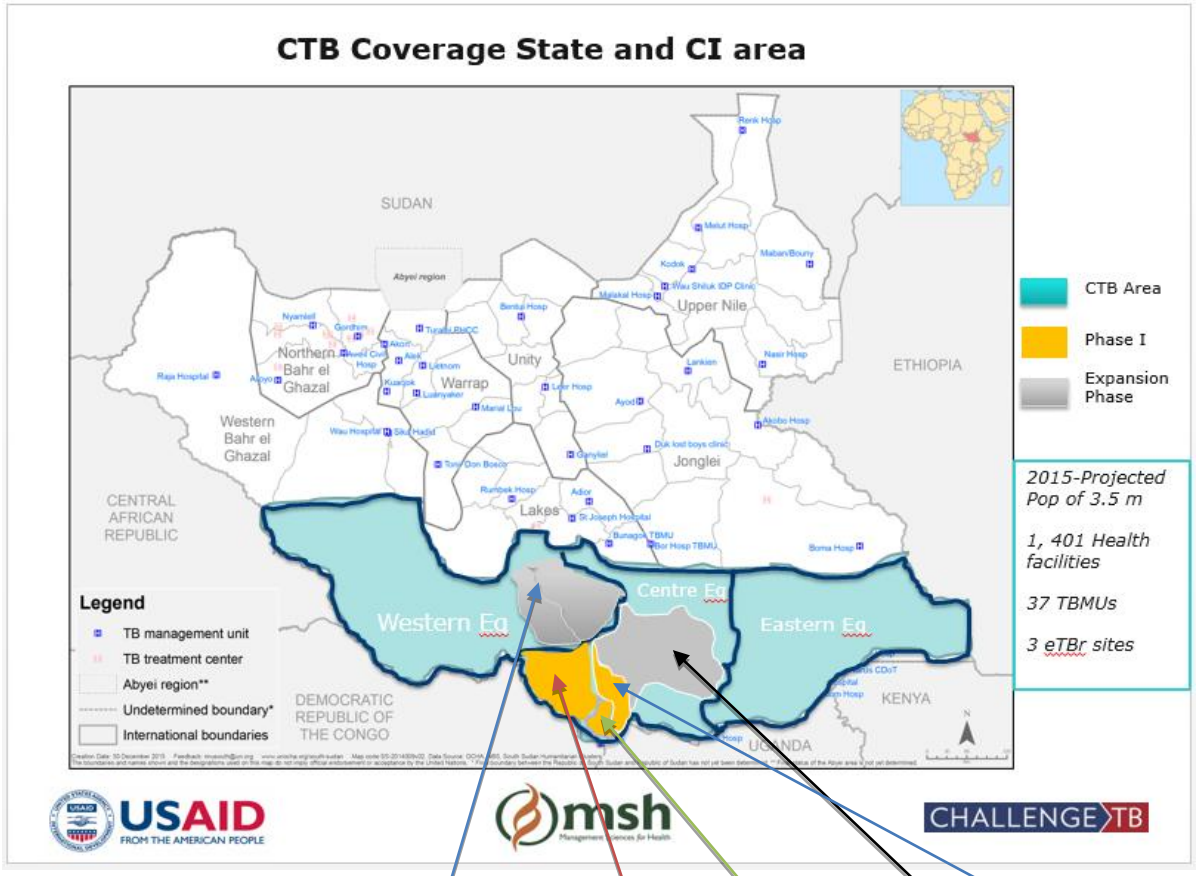
Figure 2: Trend of TB case notification, all forms reported (2008–June 2016)



4. Involvement of Community Based Organizations in TB control activities

Through CTB South Sudan, four Community Based Organizations (CBOs) were recruited to increase universal access to TB care and treatment at urban/rural and hard-to-reach areas through awareness-raising, expanding access to TB treatment, and contact investigation in the four counties of Central and Western Equatoria States. These four CBOs are: AIDS Resistant Trust (ART) for Juba County, Yei Martha Clinic (YMC) in Yei River County, Support for Peace Education Programme (SPEDP) in Morobo County, and Mundri Relief and Development Association, (MRDA) in greater Mundri Counties. See Figure 3, below.

Figure 3: Map showing CTB coverage by state and CI area



CI activities	MDRA	YMC	SPEDP	ART	Lainya
Intervention Areas	Mundri East & West	Yei	Morobo	Juba	CTB
Estimated Population 2015	101,065	267,656	137,485	488,510	118,471

5. Contact Investigation

Between July 2015 and June 2016, a total of 2,272 sputum smear positive (SS+) index cases were listed (in Juba, Yei, Morobo, Mundries, and Lainya) and 373 received home visits from trained home health providers (HHPs), through which 3,406 contacts were registered and screened using standard contact investigation (CI) tools. Among those, 455 were below the age of 14. Of all the contacts screened, 653 were identified as presumptive TB patients and were referred for diagnosis. Nine percent (60/635) confirmed SS+ cases (see Table 3 below). The TSR for contacts will be measured in the July-September 2016 period since CI was initiated in the same quarter last year. Isoniazid preventive therapy (IPT) for children under the age of five is not routinely reported and data is not available for analysis. A summary of the findings is presented in Table 3 below.

Table 3: Summary data on contact investigation in 5 counties (July 2015-June 2016)

s/n	VARIABLE	July–September 2015	October – December 2015	January–March 2016	April - June 2016	Total
1	Number of health facilities (HFs) implementing contact tracing (Yei, Lainya, Morobo, Juba and Greater Mundri)	3	3	2	4	4
2	Number of index sputum smear positive cases diagnosed and registered	892	149	80	1,151	2,272
3	Number of index case households (HH) visited and contact screened for TB	107	52	44	170	373
4	Number of HH contacts registered and screened	853	416	960	1177	3,406
5	Number of HH contacts registered and screened for TB, 0-14 years of age	69	21	48	317	455
6	Number of contacts identified with presumptive TB, all ages	182	62	293	98	635
7	Percentage of contacts with presumptive TB, all ages	23%	15%	30.5%	8.3%	18.6%
8	Percentage and number of HH contacts with presumptive TB, 0-14 years of age	6% (11)	5% (3)	10.5% (31)	3.7% (12)	12.5% (57)
9	Number of SS+ TB cases identified among the contacts	28	12	5	15	60
10	Percentage of SS+ TB cases among contacts with presumptive TB, all ages	15.40%	19.40%	2%	15.3%	9.4%
11	Percentage and number of all forms of TB among contacts with presumptive TB, all ages	24.70% (45)	33.90% (21)	33% (98)	54% (53)	37.19% (231)
12	Percentage and number of all forms of TB among contacts with presumptive TB, 0-14 years of age	1.60% (3)	8.10% (5)	9.60% (3)	8.33% (1)	5.19% (12)
13	Number of child contacts, 0-14 years of age without active TB	8	16	1	1	26
14	IPT initiated among eligible contacts 0-14 years of age (%)	N/A	N/A	N/A	N/A	N/A

6. Provision of services to Internally Displaced Populations (IDPs)

CTB is providing TB services to two IDPs (see Table 4 below).

Table 4: List of IDPs receiving services

Name of IDPs	***Location***	***Population***	***Implementing partner***	***Focal contact***
Mingkman	*Awerial*	*98,000*	*HealthLink*	*Komache C/O +211922089696*
UN-House (Juba POC)	*JuBa*	*55,0000*	*International Medical Corps*	*Dr. Maroni +211 927000211*

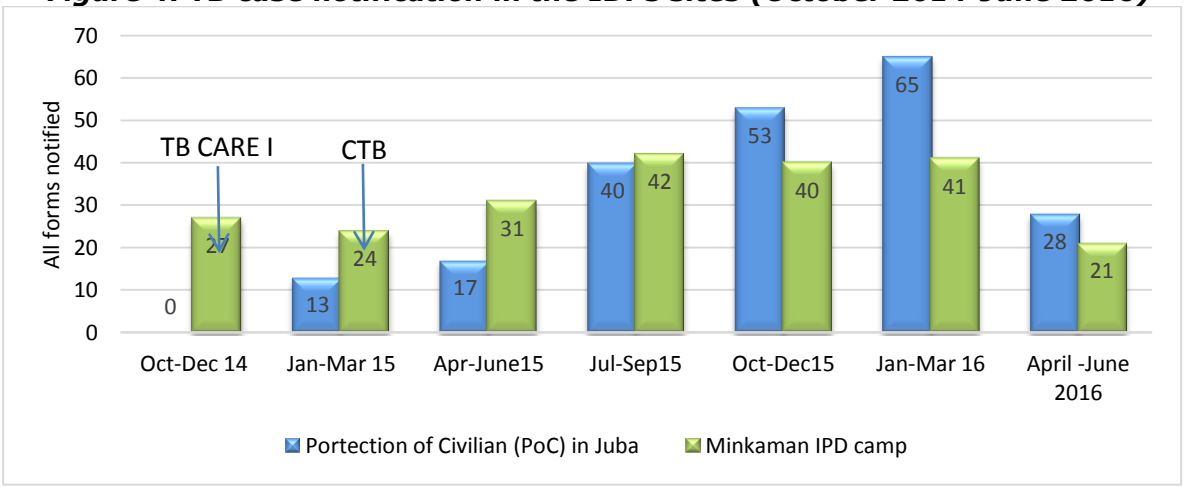
Through CTB support, quality TB services are more accessible to displaced populations. A joint assessment of health services was conducted in the Juba Protection of Civilians (POC) site in collaboration with the partner engaged in health service delivery. The CTB team conducted:

- Three days of on-site mentoring to clinicians and a lab technician
- Health education sessions using a flip chart to convey TB messages

Similar Joint Supportive supervision was conducted at the Mingkaman IDP camp to identify unmet needs. Through collaboration with partners and the NTP, health care workers (HCWs) were trained on TB diagnosis and case management and the Finding TB cases Actively, Separating safely, and Treating effectively tracking strategy (FAST). Standard operating procedures (SOPs) were provided to increase TB case detection at the Triage, outpatient department (OPD), antenatal care (ANC), Wards and HIV Clinic. HHPs were also trained on basics of TB, identification of presumptive cases, referral for diagnosis, follow-up care for TB patients to ensure treatment adherence, and conducting health education using flip charts.

Through the NTP, and in collaboration with partners, CTB has coordinated the provision of lab equipment, TB lab supplies, and TB drugs. Monitoring and supervision are regularly conducted jointly with NTP. The quality of TB laboratory services has been monitored by including the labs in the External Quality Assessment (EQA) network. Cumulatively, 495 TB cases have been diagnosed and enrolled in treatment within the intervention area since October 2014 (See Figure 4). The TSR for Minkaman is 82% and 71% for POC. Additionally, a framework was developed to ensure access to TB prevention, care, and control services for IDP camps in South Sudan.

Figure 4: TB case notification in the IDPs sites (October 2014-June 2016)



Technical/administrative challenges and actions to overcome them:

Challenges	Actions
1. Dr. Stephen Macharia resigned from the position of Project Director as of April 29, 2016.	To fill Stephen's gap and ensure a proper and smooth transition, Dr, Berhanemeskal Assefa, MSH's Principal Technical Advisor on TB, took on the role of acting Project Director for CTB South Sudan for 10 weeks. Dr. Berhane was based in South Sudan until the current crisis which forced him to be evacuated on July 12. He has continued his role of Acting Project Director remotely from Ethiopia and is in touch with staff in South Sudan, the Mission, MSH HQ and PMU on a regular basis. The hiring for a new Project Director is in process and Dr. Berhane will return to South Sudan when the security is stabilized.
2. A stock-out of GeneXpert cartridges affected testing from January-June 2016 (see table 5.1). No GeneXpert tests were done during the reporting quarter.	Monitor the use of cartridges and place requests as early as possible.
3. Delayed development of childhood and multi drug resistant TB (MDR-TB) guidelines has stalled the process of initiating IPT and enrolling child MDR patients in treatment in South Sudan.	The process of developing a childhood protocol through Global Fund (GF) has already begun.
4. Increased violence on the roads is restricting movement. This might continue to affect the implementation of activities in the Year 3 work plan.	Maximize the use of community-based organizations (CBOs) on the ground
5. TB Case notification has deteriorated due to the facts that: • Most of the lab technicians are recruited on a contacts basis by implementing partners and the project came to an end last quarter; • There is high turnover among trained Health workers because of unpaid and low government salaries; and • Community mobilizers are not interested in voluntary work given the ongoing economic crisis in the country; hence health workers are not motivated to work 8-hour days or compile and send reports.	Strengthen community involvement and participation through CBO engagement.
6. There is a lack of TB services in Bor, the area of origin of IDP in Mingkaman, and free movement occurs between the camp and Bor town.	A joint supervision visit in collaboration with the NTP to initiate TB services in Bor was conducted from July 4-8, 2016. This was a success in that an LED microscope was supplied with on-the-job job training to the lab technician. A TB

	clinic is to be designated soon and training of clinicians planned for mid-July, hence TB care service will be started in the hospital.
7. The contact investigation reporting rate has deteriorated compared to the previous quarter due to insecurity in Morobo County, and most of the mobilizers are not able to do voluntary work.	The CBO will scale up contact investigation and support home health promoters (HHPs) in Juba, Yei and Morobo.
8. There is poor recording of TB suspected cases referred by TB community mobilizers in the laboratory and TB management unit (TBMU) registers. There is poor integration of TB services into public HFs.	The NTP, State Ministry of Health (MOH) and County Health Department (CHD) need to enforce an integration policy to accommodate TB services.

2. Year 2 activity progress

Sub-objective 1. Enabling environment								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Endorsement and dissemination of finalized national documents (National Strategic Plan [NSP], annual plan, guidelines, manuals, standard operating procedures [SOPs])	1.1.1	Validation workshop	Validation completed NTP documents printed and disseminated			The MOH planned to conduct it annual assembly forum on June 18, 2016 with delegates from the states, including State Minsters of Health, Directors General and Directors. The NTP had planned to use this opportunity to validate and endorse its major documents: NSP, guidelines, SOPs and manuals.	Partially met	The planned summit has been delayed.
Develop implementation plan for the NSP	1.1.2	Consultant recruited, consultative meeting conducted	Finalized and disseminated implementation plan			The consultant has been contacted and availability will be confirmed. The consultant was connected with NTP and is awaiting their concurrence.	Partially met	The consultant is available, but a consultative meeting has not been conducted yet. However, this technical assistance (TA) is linked to the endorsement of the NSP, which is still pending.

Sub-objective 2. Comprehensive, high quality diagnostics								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Develop a National TB Laboratory Strategic Plan (NTLSP) 2015–2019 (aligned to the broader TB National Strategic Plan)	2.1.1	Consultative and TWG meetings conducted	NTLSP finalized, validated, finalized, printed, and disseminated	Consultant was contacted and TOR was drafted.		TOR for the consultant to support the development of the National TB Lab Strategic Plan has been developed and tentatively the consultant is tentatively available in South Sudan between the 2nd and 3rd week of August 2016. A purchase request for the workshop to involve the TWG has already been raised.	Partially met	The MOH, through the Director General of the National Public Health Laboratory, has yet to give concurrence for the idea of developing the National TB Lab Strategic Plan. We are following this through the National TB Program.
Annual action plan for laboratory developed for the period 2016–2017	2.1.2		Annual action plan for laboratory developed, printed, and disseminated	Waiting to finalize the NTLSP, after which the lab manual will be developed		This activity is linked to the development of the NTLSP. The annual action plan will be extracted from the NTLSP, once developed.	Partially met	The annual action plan will be extracted from the NTLSP, once developed.
Integrate TB laboratory services into the functional PHCCs	2.1.3	HFs identified, solar system installed	LED microscopes procured, lab training conducted	30 supportive supervision visits conducted	30 supportive supervision visits conducted	Twelve out of 14 labs assessed have integrated TB diagnosis (86%). Ten are in Central Equatoria State (CES) and 2 in Eastern Equatoria state (EES).	Partially met	Joint Supportive Supervisory mentorship visits were conducted from May 15-26, 2016, involving 12 TB labs within CES, where 8 solar panels were installed at TB labs with LED microscopes. During the supervisory visits, 12 lab

						This was followed by 3 LED microscopy trainings that involved 26 lab techs (22 males and 4 females). 26 LED microscopes have been distributed to 7 states with high-populated facilities Starter kits (lab reagents, slides, etc.) were distributed		technicians (all male) were mentored. The labs were supplied with consumables during the visits. CTB printed and distributed 40 photocopied TB lab registers to ensure continuity of TB diagnosis while waiting for the revised register to be finalized by the NTP. Following an agreement with the NTP for an accelerated plan to deploy LED microscopes, 27 LED microscopes have been deployed to TB labs to-date. The remaining 3 LED microscopes are planned to be deployed in the three states (Jonglei, Upper Nile and Bentiu) that were affected by war. One LED microscope will be deployed at Mingkaman IDP as soon as training of the lab technician is completed in August 2016. All remaining LED microscopes will be deployed by the end of August 2016. Currently, the 4th LED microscopy training for lab technicians in Western Equatorial State (WES) is in progress (Yambio) and will end on July 15, 2016.

Peripheral lab staff and a county focal person were trained on EQA and sampling of slides, respectively	2.2.1	30 lab technicians trained, 25 county focal persons trained	25 support supervisions conducted	25 support supervisions conducted	25 support supervisions conducted	In order to decentralize EQA activities, laboratory technicians and county TB focal persons have been trained on EQA, particularly on randomization of slides. In total, 34 HCWs (3 female, 31 male) were trained over 3 days from the following locations: • 20 (15 lab technicians, 5 TB focal persons) from CES • 14 (12 lab technicians, 2 TB focal persons) from EES The cumulative number of laboratories involved in EQA has increased from 38 to 47 (a 23.7% increase) but only 31 (66%) laboratories were reached during the reporting period. Out of the 31 labs, 28 (90.3%) demonstrated 100% concordance	Partially met	Insecurity had been hampering the expansion of EQA lab coverage in parts of South Sudan, namely Jonglei, Upper Nile, Unity and Western Equatoria states. With improved security, the mentioned states will be covered and enrolled in EQA coverage as well. Unlike CES, where TB focal persons will benefit from the use of community TB motor bikes to perform EQA slide sampling, this may be another challenge to be addressed in the mentioned states.

Quarterly review meetings for laboratory personnel and country focal persons conducted	2.2.2	3 quarterly review meetings conducted	3 quarterly review meetings conducted	3 quarterly review meetings conducted	3 quarterly review meetings conducted (12 meetings in total for the year)	Quarterly meetings were started in Q2 to review lab performance for the previous quarter and address any challenges. In Q2, two quarterly review meetings were conducted in CES and EES. Twenty (15 lab technicians and 5 TB focal persons) from CES and 14 (12 lab technicians and 2 TB focal persons) from EES participated in this two-day review meeting. During the meetings, the TB laboratory provided feedback on the EQA. Reasons were identified for major errors. These reasons included: quality of reagents used (e.g. carbolfuchsin), workload, human error, and SOPs not being followed. The major issues were addressed through discussion and training conducted under activity 2.2.1.	Partially met	CTB, in collaboration with the NTP, has planned to conduct another Quarterly Review meeting for lab technicians in WES (Yambio) from July 18-22, 2016. During the meeting, a technical staff member from MOH/CTRL will be involved together with the State TB coordinator, WES.

County focal person involved in slide randomization collection for EQA	2.2.3	6 counties supported in slide collection	8 counties supported in slide collection	10 counties supported in slide collection	11 counties supported in slide collection	Seven TB county focal people from 7 counties (CES: 5, EES: 2) have been trained in EQA, with emphasis on randomization of slides (activity 2.2.1). The roll-out action plan was developed to cover EQA activities for Q2 (January– March). With Mission concurrence (through a modification of tracker (MOT on the CTB lab advisor and the Public Health Laboratory (PHL) TB focal person participated in lab training from June 27 to July 2, 2016 in The Hague.	Partially met	This activity is currently faced with the challenge that the MOH staff has not been paid salaries in over 3 months and therefore does not have the financial capacity to finance travel related expenses, while others have resigned from their jobs. The trained TB County Focal people are unable to travel out to conduct randomization collection of EQA slides, neither can they be advanced money to do activity as MSH policy does not allow advancing money to non-MSH staff. **Suggested way forward:** We are working out the option of benefiting from the community TB motorcycles to facilitate movement of the county TB focal persons.

Support revision and update of the existing TB laboratory manuals by lab TWG	2.2.4		Manuals updated, printed, and disseminated	With support of an external consultant, TB lab manuals (EQA guidelines, TB Lab Training Manual and AFB Smear Microscopy Manual were reviewed, with the participation of the TWG during a five-day workshop in in Juba from April 18-22, 2016. The final draft has been shared with the NTP.		TA was provided by Dr. Alaine Nyaruhirira, Senior TB Lab Technical Advisor for MSH, April 11-22, 2016. The consultant worked with the TB lab Technical Working Group (TWG), which supported the review process during the 5-day workshop. The final draft of the revised lab manuals were made available by the end of the TA.	Partially met	The document is in the process of endorsement by Ministry of Health authorities. We are closely following the progress through the National TB Program.

Support sample referral from peripheral facilities to Central Tuberculosis Referential Laboratories (CTRLs) and GeneXpert sites	2.3.1	Services outsourced and transporter and HCWs oriented	Triple packaging containers procured	Due to a stock out of cartridges since the second week of January 2016, there has been no testing (and no referral) of sputum samples using GeneXpert.		A GeneXpert algorithm was developed and 18 HCWs from Juba County were briefed on its application. Three CTRL staff members were trained on the use of GeneXpert and data management. Boda Boda services were outsourced to transport samples from the TB labs within Juba to CTRL for expert testing. Unfortunately, due to stock-out of cartridges, no testing is currently taking place. A purchase request for the procurement of additional 1000 triple packaging containers has been raised. A purchase request for outsourcing of motorcycle for samples transportation has been raised to resume transportation of sputum samples, once cartridges are in country.	Met	The transportation of samples for GeneXpert testing and culture & DTS has been a success, but suspended since the second week of January 2016 due to stock-out of cartridges. GF, through the United Nations Development Program (UNDP), placed an order in November 2015, which was not fulfilled until June 2016. Now that the cartridges are in country, the necessary procedures to avail these cartridges at the CTRL are being followed. The outsourcing of motorbikes will be the mode of transport to support sputum samples referral from TB medical units (TBMUs) within Juba to CTRL for GeneXpert testing, Culture & drug sensitivity testing (DST) as soon as the cartridges are in the CTRL country.

Sub-objective 3. Patient-centered care and treatment								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Support revision of SOPs and tools for contact investigation	3.1.1	SOPs and tools revised and printed	SOPs and tools distributed	SOPs and tools for CI revised, printed, and distributed		SOPs and tools for CI were revised internally with support from Dr. Berhane, and are ready for validation by TB TWG.	Partially met	The TB TWG planned to meet on June 14 to draft and review the TOT for TWG and the SOPs for CI. However, due to a competing priority of the TWG, the meeting was postponed until July 14, 2016. Distribution is planned for the third week of July.
Support implementation of contact investigation among index cases in four counties in CES	3.1.2	80 HHP trained	80 HHP trained, technical oversight provided	Contact investigation conducted in 4 counties	Documentation of the contact investigation	84 HHPs (73 males and 11 females) were trained in June by the 4 CBOs (ART: 16 in Juba, YMC: 12 in Yei, SPEDP: 34 in Morobo and MRDA: 32 in Mundri West) with technical oversight provided during the cascade training.	Met	CI and health education in the hot spots areas is ongoing.
Integration of TB services into 45 general health care facilities (PHCCs/primary health care units(PHCUs) in 3 states	3.1.3	45 HCWs trained, 15 HFs providing TB treatment	45 HCWs trained, 30 HFs providing TB treatment	45 HFs providing TB treatment	45 HFs providing TB treatment	Two new TB treatment centers were established in Juba in addition to the 17 existing treatment centres. 34 HCWs (24 males and 10 females) from the above TB treatment centres	Partially met	Delays in the recruitment process of the 4 CBOS delayed the establishment of more TB treatment centres. It is planned to scale up integration of TB treatment in 26 additional functional health facilities, with

						were trained for 3 days on the basics of TB treatment protocols, and monitoring TB patients on treatment.		referral link to TBMUs through the CBOs, by 22% (i.e., 25 HFs in Q3 and 51 HF in Q4) during July- August 2016. ART: 13 additional HF, an increase of 24.6% from 8 -21 MRDA: 6 Additional HF, an increase of 28% from 2- 8 SPEDP: 6 Additional HF, an increase of 23.1 % from 3- 6 YMC: 6 Additional HF, an increase of 8.1% from 10- 16 The CTB team planned to train 40 HCWs (20 in Eastern and 20 in Western Equatoria states) July 18-21 2016.
Refresh, train, and mentor HHPs and implement partners on the basics of TB care for IDPs	3.1.4	45 HCWs trained/ refreshed	3 support visits	3 support visits	3 support visits	Two technical support visits and mentorship on TB was provided to 6 clinicians, 3 nurses and 3 laboratory technicians in Mingkaman Hospital and the Juba POC clinic with technical assistance from Dr. Berhane.	Partially met	The training of HCWs in Bentiu was not conducted because the staff could not travel due to insecurity in the town. A joint assessment will be conducted and this will be followed by training for both HCWs and HHPs in August 2016. The assessment team

								will include the International office for Migration (IOM), the NTP, and MSH. Refresher trainings for healthcare workers in Mingkaman is planned from July 4-8, 2016.
World TB Day	3.1.5		World TB Day commemorated				N/A	
Support introduction of patient kits in 45 HFs in 3 states	3.2.1			40 drug shelves procured and distributed	80 HCWs trained (pharmacist)	CTB is decentralizing TB treatment to the primary health care center (PHCC)/primary health care unit (PHCU). Drug shelves procured during Year 1 were distributed to 12 newly established treatment centers in CES. Procurement of an additional 40 wooden drug shelves is in progress and shall be in 26 TB treatment centers distributed in July 2016. This will be followed by the training of pharmacists on the proper storage of drugs.	Partially met	Procurement of TB patient kits through the GF was delayed, as TB drugs are now packed in blisters and labeled with the name of the patient. The training of the pharmacists was planned for July due to the tight schedule of the NTP drug focal person, who is to provide technical support during the training.
Support implementation of proper referral linkage from	3.2.2	4 sub-awards signed, mobilization equipment procured,	Quarterly meeting with CBOs	Quarterly meeting with CBOs	Quarterly meeting with CBOs	All the CBOs (MRDA, ART, SPEDP, and YMC) are now onboard and implementing CTB	Met	The procurement process for social mobilization material has been finalized, a potential vendor for

the community to PHCC/PHCUs using CBOs and community structures in the three states		quarterly meeting with CBOs held				direct observed treatment (DOTS) in their respective counties.		printing of mobilization equipment has been sourced, and distribution is planned for July. A quarterly meeting with CBOs is planned to be conducted July 11-13 for YMC & SEPDP, and July 14-16, 2016 for ART and MRDA. Distribution of the motorbikes was planned from July 4-8.
Support community groups in Yei, Lainya, and Morobo counties to identify and refer presumptive cases, as well as follow patients on treatment for adherence	3.2.3	Motorbikes procured, three meetings conducted, airtime distributed	3 meetings conducted, airtime distributed	3 meetings conducted, airtime distributed	3 meetings conducted, airtime distributed	HHPs in Yei and Morobo have been handed to YMC and SPEDP respectively. However, Lainya will continue to get direct support from CTB.	Met	Quarterly review meeting for HHPs in Lainya is planned from July 13 to 15. Airtime will be distributed to the active members during the quarterly review meetings.

Sub-objective 5. Infection control

Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Support development of facility-based tuberculosis infection control (TBIC) plans	5.2.1	5 county hospitals have TBIC plans, posters, and SOPs printed	10 county hospitals with TBIC plans, 5 county hospitals supervised	15 county hospitals with TBIC plans, 10 county hospitals supervised	All 15 hospitals with TBIC plans are supervised	CTB, in collaboration with the NTP and the hospital administration, and with technical support from Dr. Berhane, conducted a two-day sensitization workshop for 14 people (10 males and 4 females) at Juba Teaching Hospital (JTH) on April 12 and 13, 2016. The TOR for an Infection Prevention (IP) committee, comprehensive TBIC plan, and Health Facility Risk Assessment Checklist were discussed. All workshop attendees were elected to be the members of the larger IP committee headed by the chest physician (the TBIC focal person). The committee was formally endorsed by the Director General (DG) of the hospital. Few selected staff in the committee will be used in rolling out TBIC activities to the other facilities within Juba City. As part of TBIC control measures, procedures on renovation of the Cough Booth (sputum collection site) within the hospital are in progress.	Partially met	Renovation of the cough booth may be finalized in August 2016. A plan to conduct TBIC training and to establish TBIC plan and committee was set for quarter 4 There is a plan to roll out TBIC activities in the public and private health facilities in Juba City and the other major towns in South Sudan.

Sub-objective 6. Management of latent TB infection								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Initiate TB screening among child contacts and IPT for children without TB in the three states	6.1.1		Protocols printed, 90 HCWs trained	Technical oversight		The childhood TB guidelines have been delayed. The development of guidelines and training material will be supported through GF. The consultant has been identified. The TA has been postponed to quarter 4 2016. Training of HCWs will follow the development of the guidelines.	N/A	This TA is linked to the GF grant and completion of the activities will follow the development of the guidelines.

Sub-objective 7. Political commitment and leadership								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Support the engagement of the private sector in TB control in the three states, starting with Juba City	7.2.1	Consultative meeting conducted	Mapping of health care providers, training of HCWs from the private sector	Support supervision and mentorship	Support supervision and mentorship	After conducting the mapping exercise for the integration of TB services in private health facilities in Juba City, where 17 out of the 26 private health facilities assessed were found to be eligible for TB service integration, CTB supported the development of the urban DOTS strategy, which was shared with and for which concurrence was obtained from the USAID mission. This strategy will be shared with NTP and the National Reference	Partially met	There is no public - private mix guideline in South Sudan. There is a lack of urban DOT coordination mechanisms. Sensitize health care workers and health care providers on referral linkage between private health care and TBMU.

						Laboratory, which will be key in urban DoTs implementation. The newly recruited CBO for Juba, AIDS RESISTANCE TRUST (ART) will be trained to play an important role in the implementation of the urban DOTS activities in Juba City. Furthermore, CTB has supported the development of a Memorandum of Understanding (MoU) between the private health facility that will be engaged in urban DOTS.		

Sub-objective 8. Comprehensive partnerships and informed community involvement								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Octobert-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Monitor trends in non-USG funding sources among the partners implementing TB control	8.1.1				CBOs operating budget analyzed		N/A	
Facilitate implementation of activities tied to the GF indicators	8.2.1				GF rating		N/A	

Sub-objective 10. Quality data, surveillance and M&E

Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Support implementation of an electronic TB register (eTBr) in 10 selected counties in 3 states	10.1.1	Procurement complete	15 HCWs trained	10 HFs supervised	10 HFs supervised	Six county TB focal persons have been identified. Procurement of tablets for the TB focal person will commence in Q2. An SOW for the consultant is developed and the hiring process is underway.	Partially met	
Set up a server at the central level	10.1.2	Procurement complete	Server at NTP central level operational	Consultant was contacted and a purchase request was raised for the server with clear specifications		Procurement of assorted items for setting up the server 2014 – standard, desktop 500GB HDD, 4GB RAM, UPS, domain name, SSL certificate, SMS alert, router, shelves, Windows server 2012) will be carried out in Q2.	Partially met	

Sub-objective 11. Human resource development								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		October-December 2015	January-March 2016	April-June 2016	Year end	October 2015-June 2016		
Provide support for NTP staff to participate in International Tuberculosis Course	11.1.1			Report with recommendations for	Priority recommendations implemente	CTB supported one NTP training officer to attend a course on the Principles of TB	Partially met	

				the functioning of NTP	d and reported	Care and Prevention: Translating Knowledge to Action in Bulawayo, Zimbabwe from April 27 to May 2, 2016. However, the mission requested the remaining fund used to support TBIC.		
as	11.1.2	Report with identified best practices and work plan for NTP at the state level	Work plan implementation started and reported			The exchange visit for the state TB coordinator from Central Equatoria State and Northern Bharl Gazal State has been delayed due to insecurity.	Not met	Insecurity in the country has resulted in a delay in this activity's completion. The activity will be rescheduled once the security situation improves.
Participate in 2015 World TB Conference	11.1.3	Cape Town Union conference participation	Topics identified and abstracts drafted for 2016			CTB supported the Country Project Directors (Dr. Stephen Macharia and Deputy NTP Manager, Dr. Joseph Lou) have participated in the Union conference on Lung Health in Cape Town, South Africa in Year1 and in Year 2, four abstracts were submitted to the Union conference in Liverpool, of which 2 were selected and were finalized to present in October. The selected abstracts are: *1)Implementation of*	Met	

						GeneXpert technology for rapid TB diagnosis in South Sudan, lesson learnt *2) TB detection rates through community mobilization versus household contact investigation in Rural South Sudan*		

3. Challenge TB's support to Global Fund implementation in Year 2

Table 3.1 Current Global Fund TB Grants

Name of the Grant & Principal Recipient (i.e., TB New Funding Model (TFM)-MOH)	**Average Rating***	**Current Rating**	**Total Approved Amount**	**Total Disbursed to Date**	**Total Expensed** (if available)
TB NFM (z	N/A	N/A	$ 15.5M	$ 0 M	
TB/HIV TFM (SSD-708-G11-T) - UNDP	B1	B1	$ 18.7M	$ 18.7M	
TB Round 5 SSD-506-G06-T-UNDP	A2	A1	$ 22.9M	$ 22.9M	
SSD-202-G02-T-00-UNDP 7	N/A	N/A	$ 14.0M	$ 14.0M	
Total	**A2**		**$ 71.2 M**	**$ 55.7M**	

** Since January 2010*
*** Current NFM grant not cumulative amount; this information can be found on GF website or ask in country if possible*

In-country Global Fund status - key updates, current conditions, challenges and bottlenecks

- South Sudan is classified as a non-Country Coordinating Mechanism (CCM) country, with UNDP as the principal recipient. Although the prime recipient does not require CCM approval, they are working closely with the interim CCM and are updating them regularly.
- The Principal Recipient of the GF (UNDP) has signed a letter of agreement with the sub-recipients. Two new sub-recipients have been recruited, including International Medical Corps (IMC) and the Catholic Organization for Relief and Development Aid (CORD AID). The contracts were signed in April 2016 to increase in TB services coverage in South Sudan, especially in hard-to-reach areas (IDP and POCs).
- The first-line of drugs procured through UNDP have arrived in country. Additionally, there has been a delay in the delivery of cartridges for GeneXpert testing, which were due in June 2016.
- The construction work in the CTRL is complete and negative pressure has been installed. Testing of the negative pressure is pending. Delays in the procurement of furniture have halted the installation of biosafety cabinets and other equipment.
- GeneXpert cartridges (3,500) procured by the Global Fund were received in the country on June 28, 2016
- More than 7 labs have been assessed for renovation and integration of TB services through the Global Fund.

Challenge TB & Global Fund collaboration this quarter – Describe Challenge TB involvement in GF support/implementation

- CTB is the secretariat to the TWG and is convening meetings where activity implementation has been harmonized and tasks are shared among partners.
- CTB has worked to take stock of slides from HFs, reallocating slides from locations with a surplus to those with shortages, CTB has printed and distributed a small quantity of lab registers to newly integrated labs and those with stock-outs. This has alleviated the shortages experienced in the country.

4. Success Stories – Planning and Development

Planned success story title:	Involvement of Community Based Organizations (CBOs) in TB case identification
Sub-objective of story:	3. Patient-centered care and treatment
Intervention area of story:	4.1. Contact investigation implemented and monitored
Brief description of story idea:	Working with Community Based organizations to improve TB case detection

Status update: TB Treatment outcomes

Mary Yeno's family lives in Kenyi Village of Lainya County one of the CTB supported area through TB community mobilizers. "Mary became sick when she was only a month old. She had a cough, difficulty breathing, and was not breastfeeding well. She was very thin, her weight was 4.2kg at time of diagnosis'' said her mother. she visited 3 health centres where Mary has been given cough syrups but no improvement and was admitted for two weeks, natives around advised her to take the child to traditional healer said Mary's mum however, the child did not improve. About 3 months Mary's mum had tried all possible ways to save life of her child in vain. One day, Mary's mum decided to take her to Yei Civil hospital which is about 34 Km from Kenyi Village.

While at the out-patient department (OPD), she met one of the patient who told her about her husband who was suffering from TB with the same symptoms as baby Mary so she advised and directed her to take the child to the TB Unit. Mary was diagnosed with pulmonary TB in the Hospital by a CTB trained nurse by using the WHO standard tools for diagnosis of TB in children. Following diagnosis of Mary with Pulmonary TB, CTB-trained community TB mobilizers conducted contact tracing in Mary's Household and neighbourhood. They found that Mary's father had signs and symptoms of TB and referred for diagnosis where he was found to be pulmonary smear positive TB.

Mary after two weeks on anti- TB treatment.

Mary and her father were started on anti-TB treatment in November 2015, and both successfully completed their six-month treatment in April 2016 through close follow up and monitoring of treatment by the community mobilizers in Lainya County to make sure

Mary's appetite has returned to normal and her weight has increased from 4.2 kg to 7.6 kg. She is healthy and enjoys playing like any other child. Her mother said "finally peace has come back to our family. She thanked the Challenge TB team and the community mobilizer for diagnosing and treating their sickness and saving both her husband and daughter's lives."

Mary and her elder sister after finishing her treatment during the third visit by the CTB team.

5. Quarterly reporting on key mandatory indicators

Table 5.1 MDR-TB cases detected and initiating second line treatment in country (national data)

Quarter	Number of rifampicin-resistant TB (RR-TB) or MDR-TB cases detected (3.1.4)	Number of MDR-TB cases initiating second-line treatment (3.2.4)	Comments:
Total 2010	2	0	Twenty-three MDR-TB cases were confirmed through culture and drug susceptibility testing (DST) in Nairobi between 2010 and 2016. Out of 20 MDR-TB cases detected in 2015, 17 (RR-TB) were detected through GeneXpert testing. Samples are transported to Nairobi for culture and DST. The CTRL section of the Public Health Laboratory (PHL) has been redesigned to serve as a level II laboratory. Negative pressure has been installed, pending testing. It is anticipated that culture and DST will be available by August 2016. The cartridges have been out of stock since January 2016 and only 80 samples were tested using GeneXpert in the reporting quarter. With the support of USAID through WHO, the programmatic management of drug-resistant TB (PMDT) guidelines are under review. The training material and SOPs will be developed, a section of the TB ward in Juba Teaching hospital will be renovated, and staff will be sent to Rwanda for hand-on training. Through GF, the second-line drugs will be procured.
Total 2011	2	0	
Total 2012	8	0	
Total 2013	4	0	
Total 2014	3	0	
Total 2015	20	0	
January–March 2016	1	0	
April–June 2016	0	0	
Jul–Aug 2016			
To date in 2016	1	0	

Table 5.2 Number of pre-/extensively drug-resistant TB (XDR-TB) cases started on bedaquiline (BDQ) or delamanid (DLM) (national data)

Quarter	Number of pre-/XDR-TB cases started on BDQ nationwide	Number of pre-/XDR-TB cases started on DLM nationwide	Comments:
Total 2014			The NTP, with support from partners, is in the process of reviewing the guidelines. Due to country capacity for PMDT, the consultants recommend that the country use the standard second-line regimen and use the lessons
Total 2015			
January–March 2016	N/A	N/A	

April–June 2016	N/A	N/A	learned from the operational research of new regimens being implemented globally.
Jul–Aug 2016	N/A	N/A	
To date in 2016	N/A	N/A	

Table 5.3 Number and percent of cases notified by setting (e.g., private sector, prisons) and/or population (e.g., gender, children, miners, urban slums) and/or case finding approach (CI/ACF/ICF)

		Reporting period					Comments
		October–December 2015	**January–March 2016**	**April–June 2016**	**July–September 2016**	**Cumulative Year 2**	
Overall CTB geographic areas	TB cases (all forms) notified per CTB geographic area						The CTB geographical focus is in the three states of CES, WES, and EES.
	Central Equatoria State (CES)	**996**	**962**	1,011			
	Eastern Equatoria State (EES)	**70**	**258**	69			
	Western Equatoria State (WES)	**13**	**80**	44			
	TB cases (all forms) notified for all CTB areas	**1,079**	**1,300**	1124			
	All TB cases (all forms) notified nationwide (denominator)	**1,870**	**2,573**	**2,257**			
	% of national cases notified in CTB geographic areas	**58%**	**50%**	50%			
Intervention (setting/population/approach)							
Contact investigations	CTB geographic focus for this intervention						
	Yei County	**13**	**1**	19			
	Lainya County	**1**	**4**	17			
	Morobo County	**7**	**0**	6			
	Juba County			15			
	Greater Mundri County			0			
	TB cases (all forms) notified from this	**21**	**5**	57			

	All TB cases notified in this CTB area (denominator)	**192**	**102**	1,011			
	% of cases notified from this intervention	**10.9%**	**5%**	6%			
Community referral	CTB geographic focus for this intervention						
	Yei County	**37**	**25**	3			
	Lainya County	**16**	**5**	0			
	Morobo County	**9**	**0**	0			
	Juba County			1			
	Greater Mundri County			0			
	TB cases (all forms) notified from this	**62**	**30**	4			
	All TB cases notified in this CTB area	**192**	**110**				
	% of cases notified from this intervention	**32%**	**28%**				

Challenge TB-supported international visits (technical and management-related trips)

#	Partner	Name of consultant	Planned quarter				Specific mission objectives	Status (cancelled, pending, completed)	Dates completed	Duration of visit (# of days)	Additional Remarks (Optional)
			Q 1	Q 2	Q 3	Q 4					
1	MSH	Lucie Blok	x				1.Develop an implementation plan for the NTP	Pending			NTP in consultation to provide a tentative time when this TA can be planned.
2	MSH	Alaine Nyaruhirira		x			1. Develop a National TB Laboratory Strategic Plan 2015–2019 (aligned to the broader TB NSP) 2. Design a plan to support NTP to achieve microscopy network accreditation according to WHO guidelines and recommendations	Pending			Consultant is available during Q4 in August 2016
3	MSH	Alaine Nyaruhirira			x		1. Support the revision and updating of the existing TB laboratory manual, including development of SOPs for TB reference laboratory	Complete	April 22, 2016	10 days	April.
4	MSH	Berhane Assefa		x			1.Support the development of facility-based TBIC plans	Complete	April 26, 2016	14 days	
5	MSH	Berhane Assefa			x		1. Support the program to adopt two tools for screening TB among child contacts 2. Support the program's initiation of IPT for children	Complete			
6	MSH	Berhane Assefa		x			1. Support the program to engage private sector in TB control in Juba City	Complete	April 26, 2016	14 days	Combined with TA no. 4.

							2. Facilitate a sensitization workshop on TB for doctors in Juba City				
7	MSH	Micah Mubeezi			x		1. Set up the server and install the software in the tablets/computer (5 days) 2. Train HCWs on the use of eTBr for TB focal persons in 10 selected counties (3 days) 3. Customize the software to fit the local context and follow up (10 days)	Pending			To be completed in Q4
8	MSH	Berhane Assefa			x		1. Development of Year 3 work plan and budget	Complete			
9	MSH	Rachel Klemmer			x		1. Support development of Year 3 work plan and budget	Pending			To be completed in Q4
10	MSH	Matt Iwanowicz				x	1. Project oversight on financial management and operation, with emphasis on CBOs	Pending			To be completed in Q4
11	MSH	Edward Bepo		x			1.The annual country directors meeting for one country director (in the Haue	Complete	June 20-24,2016	5 days	
12	MSH	Martha Anthony		x			1.The annual country directors meeting for one monitoring and evaluation (M&E) officer or the deputy country director	Complete	June 20-24,2016	5 days	
13	MSH	Anthony Worry-MSH Martin Lou-NTP					CTB Lab Capacity building workshop	Complete	27 June to 2nd July 2016	6 days	
Total number of visits conducted (cumulative for fiscal year)								9			
Total number of visits planned in approved work plan								14			
Percent of planned international consultant visits conducted								64%			

Quarterly Indicator Reporting

Sub-objective:	**1. Enabling environment**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
1.1.1. % of notified TB cases, all forms, contributed by non-NTP providers (i.e., private/non-governmental facilities)	Type of health facility and state	Quarterly	41% (859/2,120) (2014)	2% increase based on the baseline	42% (3,223/7,743) cumulatively from October 2015 to March 2016 47% (1,061/2257) January-March 2016	Reported by 44 HFs who are supported by AAA, Caritas Torit (CDOT) and Missionaries facilities

Sub-objective:	**2. Comprehensive, high quality diagnostics**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
2.1.2. A current national TB laboratory operational plan exists and is used to prioritize, plan, and implement interventions	N/A	Annually	0=not available	1=draft available	0=not available	The Operation Plan will be extracted from the NTLSP, once developed. The MOH, through the Director General of the National Public Health Laboratory, has yet to give concurrence for the idea of developing the National TB Lab Strategic Plan. We are following this through the National TB Program.

Sub-objective:	**2. Comprehensive, high quality diagnostics**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
2.2.1. #/% of laboratories enrolled in EQA for smear microscopy	States, counties	Quarterly	30 laboratories	65 laboratories	60% (47/78) laboratories during Jan 2015-2016 June	The EQA database is designed in such a way that provides cumulative annual smear microscopy results
2.2.2. #/% of laboratories showing adequate performance in external quality assurance for smear microscopy	States, counties	Quarterly	93% 28/30 laboratories	55 laboratories	90.3% (28/31) laboratories January-June 2016	Only 31 labs participated in 2016, of which 28 demonstrated 100% concordance
2.2.6. #/% of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program (e.g., Laboratory Quality Management System)	National	Annually	0% (0/1)		100% (1/1)	Juba reference laboratory
2.2.7. Number of	National,	Annually	2 GLI-	3 GLI-	3 GLI-approved	Additional standards will

Sub-objective:	**2. Comprehensive, high quality diagnostics**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
Global Laboratory Initiative (GLI)-approved TB microscopy network standards met	intermediate		approved standards (July 2015)	approved standards	standards met by end of December 2015	be achieved after the planned STTA in April 2016
2.3.1. Percent of bacteriologically confirmed TB cases that are tested for drug resistance with a recorded result	New, previously treated	Quarterly	6.7% (52/781) of previously treated patients nationally (December 2014)	15% of previously treated patients nationally	• 7% (255/3452) bacteriologically confirmed tested from October 2015 to January 2016 and 6%(26/412) previously treated • 0.4% (2/559) in January 2016 bacteriologically confirmed and 0% retreatment	Only 7 samples were tested in January 2016 due to the stock-out of GeneXpert cartridges. The procurement process was completed through the Global Fund.
2.3.9 # of samples transported for GeneXpert testing	States, counties	Quarterly	55 (July 2015)		505 samples transported from October 2015–January 2016 (CTB Year-2)	

Sub-objective:	**3. Patient-centered care and treatment**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
3.1.1. #/% of cases notified by setting (e.g., private sector, pharmacies, prisons) and/or population (e.g., gender, children, miners, urban slums) and/or case finding approach	States, counties	Quarterly	57% (4,666/8,222) in targeted states of CES, WES, and EES (2014)	Increase of 10% from the baseline	2,257 cases notified in CTB targeted states , 50% (1,124/2,257) notified from January-March 2015 In CTB Year-2, cumulatively 52% (4,055/7,743) notified from October 2015 to March 2016	12 labs were integrated to provide TB services and supplied with starter kits, and reporting tools will be provided in Q3 Refer to Table 5.3 for more detail.
3.1.4. # of MDR-TB cases detected	States, counties	Quarterly	4	20	From October 2015 to June 2016, a total of 8 Rifampicin Resistant cases detected.	Stock out of cartridges from January until June 28, 2016
3.1.20. # of contacts diagnosed with TB and enrolled on treatment	States, counties	Quarterly	28 (bacteriologically confirmed) contacts diagnosed with TB and enrolled on treatment (September 2015)	5% increase from the baseline	Overall 32 contacts October-December 2015 (12 contacts) January-March 2016 (5 contacts) April-June 2016(15 contacts)	Coverage of contacts: Investigation in 6 counties and 7 health facilities. Four CBOs were recruited to implement CI in the 5 counties
3.1.13. #/% of presumptive TB patients referred	Gender	Quarterly	182 (September 2015)	Increase of 10% above the baseline	*98 (8.3%)*	Includes cases referred through community mobilization activities and

Sub-objective:	3. Patient-centered care and treatment					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
by community referral systems						contact tracing by HHps ; however, validation of data through CTB delayed due to insecurity
3.2.1. #/% of TB cases successfully treated (all forms) by setting (e.g., private sector, pharmacies, prisons) and/or by population (e.g., gender, children, miners, urban slums)	States, counties	Quarterly	54.6% (2019/3698) CES 54.6%, WES 47.6%, EES 59.3%	80% by the end of the year	Treatment success rates: • Overall for CTB target area is 84% 1687/2007) • CES 84% (767/909) • EES 69% (20/29) • WES 66% (38/58)	The treatment success rate shows cohort of January-March 2015
3.2.4. # of MDR-TB cases initiating second-line treatment	States, counties	Quarterly	0 (2014)		N/A	MDR-TB treatment guidelines are under development. The number of MDR-TB patients in the country to date is 40. CTB is mapping MDR-TB cases and will initiate contracting to educate family members. This mapping will be completed by the CBOs
3.2.7. #/% of MDR-TB cases successfully	States, counties	Quarterly	N/A		N/A	No MDR-TB treatment is available in the country

Sub-objective:	3. Patient-centered care and treatment					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
treated						
3.2.20. #/% of health facilities providing CB-DOTS services	States, counties	Quarterly	31% (38/120)	45% (55/120)	34.3% (41/120)	The results are for the 3 target states TB service has been integrated in 9 PHCCs and DOTS services being provided

Sub-objective:	5. Infection control					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
5.2.3. #/% HCWs diagnosed with TB during reporting period	Type of health facility, gender, age	Annually	0 (July–September 2015)	5% increase of new TB cases compared to baseline	1.3 % (2/152) 1/Male and 1/Female diagnosed from PHCCs in January-March 2016	Plan to scale up the coverage after roll out of TBIC in Q4

Sub-objective:	6. Management of latent TB infection					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
6.1.11. # of children under the age of 5 years of age who initiate IPT	Gender, age, states	Quarterly	0 (2014)		N/A	CTB will start the provision of IPT in target states once childhood guidelines have been developed through support of GF

Sub-objective:	6. Management of latent TB infection					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
6.1.2. % of eligible persons completing LTBI treatment, by key population and adherence strategy	Gender, age	Quarterly	0	50% (250/500)	N/A	CTB is waiting for clear guidelines from NTP on the use of IPT for eligible groups

Sub-objective:	7. Political commitment and leadership					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
7.2.3. % of activity budget covered by private sector cost share, by specific activity	States, counties at CTB sites	Annually	N/A	TBD	Not measured	This will be measured at the end of the year

Sub-objective:	8. Comprehensive partnerships and informed community involvement					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
8.1.3. Status of National Stop TB Partnership	National level	Annually	0 (July 2015)		Not measured	This will be measured at the end of the year
8.1.4. % of local partners' operating budget covered by diverse non-USG	Local partner	Annually	N/A	TBD	Not measured	This will be measured at the end of the year

Sub-objective:	**8. Comprehensive partnerships and informed community involvement**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
funding sources						
8.2.1. GF grant rating	N/A	Annually	B1 Adequate	A2 meets expectations	Not measured	This will be measured at the end of the year

Sub-objective:	**10. Quality data, surveillance and M&E**					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
10.1.4. Status of electronic recording and reporting system	States, counties	Annually	2 = patient/case-based ERR system implemented in pilot or select sites (TB)	2 = patient/case-based ERR system implemented in pilot or select sites (TB)	4 = patient/case-based ERR system implemented in pilot or select sites (TB) 3 in Juba County and 1 in Yei County	Dr. Micah (Consultant) has been contacted. A plan to conduct server set-up has been planned and a purchase request has been submitted to procurement. The server will be installed at the national level in Q4 and TOT training will be conducted.
10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented	N/A	Annually	No (July 2015)	N/A	Not planned in year 2	Not completed
10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)	CTB geographic areas	Annually	N/A	TBD	Not budgeted in year 2	
10.2.7.	National	Annually	Yes	Yes	4 operational research	

Sub-objective:	10. Quality data, surveillance and M&E					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
Operational research findings are used to change policy or practices (e.g., change guidelines or implementation approach)			(2014)		studies are in progress, among which 2 will be presented at the 47th Union conference in Liverpool: 1. Contact investigation among smear positive TB patients who were successfully treated 2. Surveillance for MDR-TB among new and re-treatment TB cases and people living with HIV by using GeneXpert testing in South Sudan 3. TB detection rates through community mobilization versus household contact investigation in Rural South Sudan 4. A comparative study of using auramine O in LED microscopy with Ziehl-Neelsen in	

Sub-objective:	10. Quality data, surveillance and M&E					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
					the diagnosis of pulmonary TB at Munuki PHCC, Juba, South Sudan	

Sub-objective:	11. Human resource development					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
11.1.3. # of HCWs trained, by gender and technical area	Gender	Quarterly	146 (trained and mentored)		318 (M/253 and F/65) HCWs were trained between October 15 and June 16	Technical areas of trainings include: • TB Basics, management and Contact Investigation for HWC, HHPs, and CMs • LED Microscopy Training • Smear Microscopy EQA and Reporting Training • International TB Course • TBIC Training
11.1.5. % of USAID TB funding directed to local partners	CTB country project budget	Annually	9% (215,000/2,502,000)	14% (200,000/1,371,000)	Not measured	This will be measured at the end of the year